

What is claimed is:

1. A method for detecting a high flying condition in a disk drive, comprising:
comparing an observed value derived from a signal corresponding to a flying
height of a transducer head over a disk surface to a stored value; and
generating a signal indicating a high flying condition if said comparison is
5 unfavorable.

2. The method of Claim 1, wherein said stored value comprises a reference
value.

3. The method of Claim 1, wherein said stored value comprises a reference
value plus a marginal value.

4. The method of Claim 1, wherein said observed value is derived from
information stored on said disk.

5. The method of Claim 4 wherein said information used to derive said
observed value is used to derive said stored value.

6. The method of Claim 4, wherein said information is stored at a specific
location on said disk.

7. The method of Claim 1, wherein said observed value is derived from an amplitude produced in a channel by a servo sector position burst.

8. The method of Claim 1, wherein said observed value is derived from an amplitude produced in a channel by an automatic gain control field.

9. The method of Claim 1, wherein said stored value is stored on said disk in a hard sector.

10. The method of Claim 1, wherein said stored value is stored on said disk in a servo in data sector.

11. The method of Claim 1, wherein said stored value is stored on said disk in a data sector.

12. The method of Claim 1, wherein said comparison is unfavorable if said observed value is less than said stored value.

13. The method of Claim 1, wherein said stored value encodes a numerical value.

14. The method of Claim 2, wherein said reference value is derived from information stored on said disk.

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15. A method for detecting whether a flying height of a transducer head over a disk surface in a disk drive exceeds a desired amount, comprising:

5 selecting a standard transducer head flying height number, wherein said standard transducer head flying height number is based on an amplitude of a signal derived from a selected item of data written to said disk;

storing said selected standard transducer head flying height number on said disk;

reading an amplitude of said signal derived from said selected item of data written to said disk to obtain an observed transducer head flying height number;

10 comparing said selected standard transducer head flying height number to said observed transducer head flying height number; and

signaling a high fly write condition if said comparison indicates a high fly write event.

16. The method of Claim 15, wherein said step of selecting a standard transducer head flying height number for a signal derived from a selected item of data written to said disk comprises reading an amplitude of a signal derived from said selected item of data and setting said read amplitude derived from said standard transducer head
5 equal to said standard transducer head flying height number.

17. The method of Claim 15, wherein said step of selecting a standard transducer head flying height number for a signal derived from a selected item of data written to said disk comprises:

- reading an amplitude of a signal derived from said selected item of data;
- 5 adding a marginal value to said amplitude; and
- setting said sum equal to said standard transducer head flying height number.

18. The method of Claim 15, wherein said step of storing said transducer head flying height number to said disk comprises storing said number in a hard sector of said disk.

19. The method of Claim 15, wherein said step of storing said transducer head flying height number to said disk comprises storing said number in a data sector of said disk.

20. The method of Claim 19, wherein said data sector is located in a customer data region of said disk.

21. The method of Claim 15, wherein said step of selecting a standard transducer head flying height number is performed prior to delivery of said disk drive to an end user.

22. The method of Claim 15, wherein said step of selecting a standard transducer head flying height number is performed prior to storing customer data on said disk.

23. The method of Claim 15, wherein at least one standard transducer head flying height number is selected for each of a plurality of tracks of said disk.

24. The method of Claim 15, wherein at least one standard transducer head flying height number is selected for a plurality of data sectors of said disk.

25. The method of Claim 15, wherein said step of comparing comprises subtracting said observed transducer head flying height number from said standard transducer head flying height number.

26. The method of Claim 15, wherein a high fly write event is indicated if said step of comparing results in a number that is positive.

27. The method of Claim 15, wherein said selected item of data is an automatic gain control field.

28. The method of Claim 15, wherein said selected item of data is a servo sector position burst.

29. The method of Claim 15, wherein said selected item of data is a group of servo sector position bursts.

30. A hard disk drive capable of detecting a high fly write condition,
comprising:

a base;

a magnetic storage disk rotatably mounted to said base, wherein data is stored on
5 said storage disk magnetically in concentric tracks, and wherein said data stored on said
storage disk includes high fly write reference data;

an actuator arm pivotally mounted to said base;

a transducer head mounted to a first end of said actuator arm, wherein said
transducer head is capable of reading information from and writing information to said
10 magnetic storage disk;

a voice coil motor for moving said first end of said actuator arm radially across
said magnetic storage disk, wherein said transducer head is capable of addressing said
concentric tracks;

a controller for actuating said voice coil motor to position said transducer head
15 over a selected concentric track; and

a channel for transmitting a signal from said transducer head to a host computer
and for transmitting a signal from said host computer to said transducer head, wherein a
signal read by said transducer head having an amplitude that is less than a reference
amplitude stored on said disk indicates that said transducer head is in a high fly write
20 condition.

31. The disk drive of Claim 30, wherein said reference amplitude data comprises an encoded value.

32. The disk drive of Claim 30, wherein said reference amplitude is stored in a hard sector of said disk.

33. The disk drive of Claim 30, wherein said reference amplitude is stored in a data sector of said disk.

34. The disk drive of Claim 30, wherein said reference amplitude is stored in a customer data region of said disk.